

## **DATA QUALITY ASSURANCE REVIEW**

SITE NAME Browns Tree Care Dump  
WORK ORDER NUMBER 20600.012.001.1182.01 TDD NUMBER 0001/18-182  
PROJECT NUMBER \_\_\_\_\_ SDG NUMBER 1812211, 1812246  
and 1812274

Weston Solutions, Inc. (WESTON®) has completed a QA review for Work Order Number 20600.012.001.1182.01, SDG Nos. 1812211 (four samples), 1812246 (four samples) and 1812274 (five samples), Browns Tree Care Dump. A total of thirteen samples were analyzed for Volatile Organic Compounds (VOCs) by Eurofins Air Toxic, Inc. Sample numbers are listed below.

BVF-SUM-011-20181210-1	BVF-SUM-012-20181210-1	BVF-SUM-013-20181210-1
BVF-SUM-014-20181210-1		
BVF-SUM-011-20181211-1	BVF-SUM-012-20181211-1	BVF-SUM-013-20181211-1
BVF-SUM-014-20181211-1		
BVF-SUM-011-20181212-01	BVF-SUM-012-20181212-01	BVF-SUM-013-20181212-1
BVF-SUM-014-20181212-1	BVF-SUM-014-20181212-3	

This data package was validated to determine if Quality Control (QC) specifications were achieved, following *USEPA National Functional Guidelines for Organic Superfund Methods Data Review* (January, 2017), *USEPA National Functional Guidelines for Inorganic Superfund Data Review* (January, 2017), *USEPA Contract Laboratory Program National Functional Guidelines for High Resolution Superfund Methods Data Review* (April, 2016), *Quality Assurance/Quality Control Guidance for Removal Activities* (September, 2011), and/or the *Regional Protocol for Holding Times, Blanks, and VOA Preservation* (April 13, 1989). Specific data qualifications are listed in the following discussion.

**REVIEWER** Diane Quigley **DATE** December 19, 2018

## Data Qualifiers

Data Qualifier Definitions were supplied by the Office of Solid Waste and Emergency Response (September 1989) and are included in the Functional Guidelines. Data qualifiers may be combined (UJ, QJ) with the corresponding combination of meanings. Additional qualifiers may be added to provide additional, more specific information (JL, UB, QJK), modifying the meaning of the primary qualifier. Additional qualifiers utilized by WESTON are H, L, K, B, and Q.

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation or detection limit, which has been adjusted for sample weight/sample volume, extraction volume, percent solids, sample dilution or other analysis specific parameters.

An additional qualifier, "B", may be appended to indicate that while the analyte was detected in the sample, the presence of the analyte may be attributable to blank contamination and the analyte is therefore considered undetected with the sample detection or quantitation limit for the analyte being elevated.

J - The analyte was analyzed for, but the associated numerical value may not be consistent with the amount actually present in the environmental sample or may not be consistent with the sample detection or quantitation limit. The value is an estimated quantity. The data should be seriously considered for decision-making and are usable for many purposes.

An additional qualifier will be appended to the "J" qualifier that indicates the bias in the reported results:

L Low bias

H High bias

K Unknown bias

Q The reported concentration is less than the sample quantitation limit for the specific analyte in the sample.

The L and H qualifier will only be employed when a single qualification is required. When more than one quality control parameter affects the analytical result and a conflict results in assigning a bias, the result will be flagged JK.

R - Quality Control indicates that data are unusable for all purposes. The analyte was analyzed for, but the presence or absence of the analyte has not been verified. Resampling and reanalysis are necessary for verification to confirm or deny the presence of an analyte.

N - The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."

## VOC DATA EVALUATION

### 1. Analytical Method:

Samples were prepared and analyzed for VOCs using the procedures specified in **EPA Method TO-15**.

### 2. Holding Time/Sample Receipt:

All VOC samples were analyzed within the required holding time of less than 30 days. No qualifications are placed on the data.

It was noted in the case narrative that sample BVF-SUM-011-20181210-1 (1812211-01A) arrived at the laboratory at 0.1 psi (Final sampling pressure was 5 psi) and sample BVF-SUM-014-20181210-1 (1812211-04A) at 1.8 psi (Final sampling pressure was 5 psi). Professional judgment was used in rejecting (R) all results in sample BVF-SUM-011-20181210-1 and estimating all results (UJ) in sample BVF-SUM-014-20181210-1: direction of bias unknown.

It was noted in the case narrative that sample BVF-SUM-014-20181212-3 (1812274-05A) was received at the laboratory with significant vacuum remaining in the canister. Since this sample is an equipment blank that contained no contaminants, no action was taken.

### 3. Tuning/Performance:

BFB tuning of the mass spectrometer(s) was conducted at the required frequency and results were within the required criteria. No qualifications are placed on the data.

### 4. Initial Calibration:

All percent relative standard deviations (%RSDs) were less than the control limit provided ( $\leq 30$ ) or a linear regression was used and the correlation coefficient was greater than 0.995. No qualifications are placed on the data.

### 5. Continuing Calibration:

All percent differences (%Ds) were less than the control limit provided ( $\leq 30$ ). No qualifications are placed on the data.

### 6. Blanks:

#### A. Laboratory Blanks

A method blank was prepared at the required frequency of every time samples were prepared/digested for each matrix or every 20 samples whichever is greater. No target analytes were detected in the method at concentrations that warrant blank action. No qualifications are placed on the data.

#### B. Field Blanks:

Sample BVF-SUM-014-20181212-3 (1812274-05A) is the field blank associated with all samples and included in SDG 1812274. No compounds were detected.

7. System Monitoring Compounds (SMC):

All recoveries of the system monitoring compounds (surrogates) were within the control limits provided. No qualifications are placed on the data.

8. Matrix Spike/Matrix Spike Duplicate (MS/MSD):

No sample from this analytical package underwent MS/MSD analysis for the air matrix. No qualifications are placed on the data.

9. Duplicates:

A. Laboratory Duplicate Analysis:

No sample from this analytical package underwent laboratory duplicate analysis for the air matrix. No qualifications are placed on the data.

B. Field Duplicate Analysis:

No field duplicate samples were submitted with this analytical package. No qualifications are placed on the data.

10. Internal Standards:

Areas of the three VOC internal standards were within the control limits of 60% to +140% and retention times were within 0.33 minutes from the associated 12 hour calibration standard. No qualifications are placed on the data.

11. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD):

The laboratory analyzed a LCS/LCSD and recoveries and relative percent difference (RPD) values were within the control limits provided. Methyl acetate was not spiked into the LCS or LCSD, however, it was included in the CCV and recovery criteria was met. No qualifications are placed on the data.

12. Target Compound Identification:

All VOC target compounds reported by the laboratory met identification criteria of relative retention times (RRT) within 0.06 RRT units of the 12 hour standard and that all ions present in the standard mass spectrum were present in the sample mass spectrum and the abundance of these ions agreed within  $\pm$  20% of the standard. No qualifications are placed on the data.

13. Target Compound Quantitation and Reporting Limits:

Concentrations of all reported compounds were correctly calculated.

However, the laboratory noted in the case narrative that the reported result for 4-Ethyltoluene in sample BVF-SUM-013-20181210-1 may be biased high due to co-elution with a non-target compound with similar characteristic ions. Both the primary and secondary ion for 4-Ethyltoluene exhibited potential interference. Therefore, professional judgment was used in estimating (JH) the positive result for 4-ethyltoluene in sample BVF-SUM-013-20181210-1 (1812211-03A).

14. Laboratory Contact:

No laboratory contact was required.

15. Overall Assessment

The analytical data is acceptable for use with the applied qualifications with the following exceptions: all results were rejected (R) in sample BVF-SUM-011-20181210-1 (1812211-01A).



## Air Toxics

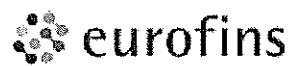
Client Sample ID: BVF-SUM-011-20181210-1

Lab ID#: 1812211-01A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121212	Date of Collection:	12/11/18 9:45:00 AM	
Dil. Factor:	1.33	Date of Analysis:	12/12/18 07:04 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.66	Not Detected	3.3	Not Detected
Freon 114	0.66	Not Detected	4.6	Not Detected
Chloromethane	6.6	Not Detected	14	Not Detected
Vinyl Chloride	0.66	Not Detected	1.7	Not Detected
1,3-Butadiene	0.66	Not Detected	1.5	Not Detected
Bromomethane	6.6	Not Detected	26	Not Detected
Chloroethane	2.7	Not Detected	7.0	Not Detected
Freon 11	0.66	Not Detected	3.7	Not Detected
Ethanol	2.7	Not Detected	5.0	Not Detected
Freon 113	0.66	Not Detected	5.1	Not Detected
1,1-Dichloroethene	0.66	Not Detected	2.6	Not Detected
Acetone	6.6	12	16	28
2-Propanol	2.7	Not Detected	6.5	Not Detected
Carbon Disulfide	2.7	Not Detected	8.3	Not Detected
3-Chloropropene	2.7	Not Detected	8.3	Not Detected
Methylene Chloride	6.6	Not Detected	23	Not Detected
Methyl tert-butyl ether	2.7	Not Detected	9.6	Not Detected
trans-1,2-Dichloroethene	0.66	Not Detected	2.6	Not Detected
Hexane	0.66	Not Detected	2.3	Not Detected
1,1-Dichloroethane	0.66	Not Detected	2.7	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.7	3.2	7.8	9.5
cis-1,2-Dichloroethene	0.66	Not Detected	2.6	Not Detected
Tetrahydrofuran	0.66	1.4	2.0	4.3
Chloroform	0.66	Not Detected	3.2	Not Detected
1,1,1-Trichloroethane	0.66	Not Detected	3.6	Not Detected
Cyclohexane	0.66	Not Detected	2.3	Not Detected
Carbon Tetrachloride	0.66	Not Detected	4.2	Not Detected
2,2,4-Trimethylpentane	0.66	Not Detected	3.1	Not Detected
Benzene	0.66	5.6	2.1	18
1,2-Dichloroethane	0.66	Not Detected	2.7	Not Detected
Heptane	0.66	Not Detected	2.7	Not Detected
Trichloroethene	0.66	Not Detected	3.6	Not Detected
1,2-Dichloropropane	0.66	Not Detected	3.1	Not Detected
1,4-Dioxane	2.7	Not Detected	9.6	Not Detected
Bromodichloromethane	0.66	Not Detected	4.4	Not Detected
cis-1,3-Dichloropropene	0.66	Not Detected	3.0	Not Detected
4-Methyl-2-pentanone	0.66	Not Detected	2.7	Not Detected
Toluene	0.66	3.6	2.5	14
trans-1,3-Dichloropropene	0.66	Not Detected	3.0	Not Detected
1,1,2-Trichloroethane	0.66	Not Detected	3.6	Not Detected
Tetrachloroethene	0.66	Not Detected	4.5	Not Detected
2-Hexanone	2.7	Not Detected	11	Not Detected

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## Air Toxics

Client Sample ID: BVF-SUM-011-20181210-1

Lab ID#: 1812211-01A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121212	Date of Collection:	12/11/18 9:45:00 AM	
Dil. Factor:	1.33	Date of Analysis:	12/12/18 07:04 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.66	Not Detected	5.7	Not Detected
1,2-Dibromoethane (EDB)	0.66	Not Detected	5.1	Not Detected
Chlorobenzene	0.66	Not Detected	3.1	Not Detected
Ethyl Benzene	0.66	Not Detected	2.9	Not Detected
m,p-Xylene	0.66	1.0	2.9	4.5
o-Xylene	0.66	Not Detected	2.9	Not Detected
Styrene	0.66	Not Detected	2.8	Not Detected
Bromoform	0.66	Not Detected	6.9	Not Detected
Cumene	0.66	Not Detected	3.3	Not Detected
1,1,2,2-Tetrachloroethane	0.66	Not Detected	4.6	Not Detected
Propylbenzene	0.66	Not Detected	3.3	Not Detected
4-Ethyltoluene	0.66	Not Detected	3.3	Not Detected
1,3,5-Trimethylbenzene	0.66	Not Detected	3.3	Not Detected
1,2,4-Trimethylbenzene	0.66	Not Detected	3.3	Not Detected
1,3-Dichlorobenzene	0.66	Not Detected	4.0	Not Detected
1,4-Dichlorobenzene	0.66	Not Detected	4.0	Not Detected
alpha-Chlorotoluene	0.66	Not Detected	3.4	Not Detected
1,2-Dichlorobenzene	0.66	Not Detected	4.0	Not Detected
1,2,4-Trichlorobenzene	2.7	Not Detected	20	Not Detected
Hexachlorobutadiene	2.7	Not Detected	28	Not Detected
Methyl Acetate	6.6	Not Detected	20	Not Detected
Methylcyclohexane	2.7	Not Detected	11	Not Detected
Naphthalene	1.3	Not Detected	7.0	Not Detected

Container Type: 6 Liter Summa Canister (100% Cert Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	102	70-130

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## Air Toxics

Client Sample ID: BVF-SUM-012-20181210-1

Lab ID#: 1812211-02A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121213	Date of Collection: 12/11/18 10:35:00 A		
Dil. Factor:	1.54	Date of Analysis: 12/12/18 07:30 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.77	Not Detected	3.8	Not Detected
Freon 114	0.77	Not Detected	5.4	Not Detected
Chloromethane	7.7	Not Detected	16	Not Detected
Vinyl Chloride	0.77	Not Detected	2.0	Not Detected
1,3-Butadiene	0.77	Not Detected	1.7	Not Detected
Bromomethane	7.7	Not Detected	30	Not Detected
Chloroethane	3.1	Not Detected	8.1	Not Detected
Freon 11	0.77	Not Detected	4.3	Not Detected
Ethanol	3.1	Not Detected	5.8	Not Detected
Freon 113	0.77	Not Detected	5.9	Not Detected
1,1-Dichloroethene	0.77	Not Detected	3.0	Not Detected
Acetone	7.7	Not Detected	18	Not Detected
2-Propanol	3.1	Not Detected	7.6	Not Detected
Carbon Disulfide	3.1	Not Detected	9.6	Not Detected
3-Chloropropene	3.1	Not Detected	9.6	Not Detected
Methylene Chloride	7.7	Not Detected	27	Not Detected
Methyl tert-butyl ether	3.1	Not Detected	11	Not Detected
trans-1,2-Dichloroethene	0.77	Not Detected	3.0	Not Detected
Hexane	0.77	Not Detected	2.7	Not Detected
1,1-Dichloroethane	0.77	Not Detected	3.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.1	Not Detected	9.1	Not Detected
cis-1,2-Dichloroethene	0.77	Not Detected	3.0	Not Detected
Tetrahydrofuran	0.77	Not Detected	2.3	Not Detected
Chloroform	0.77	Not Detected	3.8	Not Detected
1,1,1-Trichloroethane	0.77	Not Detected	4.2	Not Detected
Cyclohexane	0.77	Not Detected	2.6	Not Detected
Carbon Tetrachloride	0.77	Not Detected	4.8	Not Detected
2,2,4-Trimethylpentane	0.77	Not Detected	3.6	Not Detected
Benzene	0.77	3.0	2.4	9.7
1,2-Dichloroethane	0.77	Not Detected	3.1	Not Detected
Heptane	0.77	Not Detected	3.2	Not Detected
Trichloroethene	0.77	Not Detected	4.1	Not Detected
1,2-Dichloropropane	0.77	Not Detected	3.6	Not Detected
1,4-Dioxane	3.1	Not Detected	11	Not Detected
Bromodichloromethane	0.77	Not Detected	5.2	Not Detected
cis-1,3-Dichloropropene	0.77	Not Detected	3.5	Not Detected
4-Methyl-2-pentanone	0.77	Not Detected	3.2	Not Detected
Toluene	0.77	1.7	2.9	6.3
trans-1,3-Dichloropropene	0.77	Not Detected	3.5	Not Detected
1,1,2-Trichloroethane	0.77	Not Detected	4.2	Not Detected
Tetrachloroethene	0.77	Not Detected	5.2	Not Detected
2-Hexanone	3.1	Not Detected	13	Not Detected

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## Air Toxics

Client Sample ID: BVF-SUM-012-20181210-1

Lab ID#: 1812211-02A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121213	Date of Collection:	12/11/18 10:35:00 A	
Dil. Factor:	1.54	Date of Analysis:	12/12/18 07:30 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.77	Not Detected	6.6	Not Detected
1,2-Dibromoethane (EDB)	0.77	Not Detected	5.9	Not Detected
Chlorobenzene	0.77	Not Detected	3.5	Not Detected
Ethyl Benzene	0.77	Not Detected	3.3	Not Detected
m,p-Xylene	0.77	Not Detected	3.3	Not Detected
o-Xylene	0.77	Not Detected	3.3	Not Detected
Styrene	0.77	Not Detected	3.3	Not Detected
Bromoform	0.77	Not Detected	8.0	Not Detected
Cumene	0.77	Not Detected	3.8	Not Detected
1,1,2,2-Tetrachloroethane	0.77	Not Detected	5.3	Not Detected
Propylbenzene	0.77	Not Detected	3.8	Not Detected
4-Ethyltoluene	0.77	Not Detected	3.8	Not Detected
1,3,5-Trimethylbenzene	0.77	Not Detected	3.8	Not Detected
1,2,4-Trimethylbenzene	0.77	Not Detected	3.8	Not Detected
1,3-Dichlorobenzene	0.77	Not Detected	4.6	Not Detected
1,4-Dichlorobenzene	0.77	Not Detected	4.6	Not Detected
alpha-Chlorotoluene	0.77	Not Detected	4.0	Not Detected
1,2-Dichlorobenzene	0.77	Not Detected	4.6	Not Detected
1,2,4-Trichlorobenzene	3.1	Not Detected	23	Not Detected
Hexachlorobutadiene	3.1	Not Detected	33	Not Detected
Methyl Acetate	7.7	Not Detected	23	Not Detected
Methylcyclohexane	3.1	Not Detected	12	Not Detected
Naphthalene	1.5	Not Detected	8.1	Not Detected

Container Type: 6 Liter Summa Canister (100% Cert Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	99	70-130

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## Air Toxics

Client Sample ID: BVF-SUM-013-20181210-1

Lab ID#: 1812211-03A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121214	Date of Collection:	12/11/18 8:45:00 AM	
Dil. Factor:	1.53	Date of Analysis:	12/12/18 07:56 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.76	Not Detected	3.8	Not Detected
Freon 114	0.76	Not Detected	5.3	Not Detected
Chloromethane	7.6	Not Detected	16	Not Detected
Vinyl Chloride	0.76	Not Detected	2.0	Not Detected
1,3-Butadiene	0.76	Not Detected	1.7	Not Detected
Bromomethane	7.6	Not Detected	30	Not Detected
Chloroethane	3.1	Not Detected	8.1	Not Detected
Freon 11	0.76	Not Detected	4.3	Not Detected
Ethanol	3.1	3.3	5.8	6.2
Freon 113	0.76	Not Detected	5.9	Not Detected
1,1-Dichloroethene	0.76	Not Detected	3.0	Not Detected
Acetone	7.6	61	18	150
2-Propanol	3.1	6.0	7.5	15
Carbon Disulfide	3.1	Not Detected	9.5	Not Detected
3-Chloropropene	3.1	Not Detected	9.6	Not Detected
Methylene Chloride	7.6	Not Detected	26	Not Detected
Methyl tert-butyl ether	3.1	Not Detected	11	Not Detected
trans-1,2-Dichloroethene	0.76	Not Detected	3.0	Not Detected
Hexane	0.76	1.8	2.7	6.5
1,1-Dichloroethane	0.76	Not Detected	3.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.1	13	9.0	40
cis-1,2-Dichloroethene	0.76	Not Detected	3.0	Not Detected
Tetrahydrofuran	0.76	7.6	2.2	22
Chloroform	0.76	Not Detected	3.7	Not Detected
1,1,1-Trichloroethane	0.76	Not Detected	4.2	Not Detected
Cyclohexane	0.76	Not Detected	2.6	Not Detected
Carbon Tetrachloride	0.76	Not Detected	4.8	Not Detected
2,2,4-Trimethylpentane	0.76	Not Detected	3.6	Not Detected
Benzene	0.76	22	2.4	70
1,2-Dichloroethane	0.76	Not Detected	3.1	Not Detected
Heptane	0.76	1.3	3.1	5.2
Trichloroethene	0.76	Not Detected	4.1	Not Detected
1,2-Dichloropropane	0.76	Not Detected	3.5	Not Detected
1,4-Dioxane	3.1	Not Detected	11	Not Detected
Bromodichloromethane	0.76	Not Detected	5.1	Not Detected
cis-1,3-Dichloropropene	0.76	Not Detected	3.5	Not Detected
4-Methyl-2-pentanone	0.76	Not Detected	3.1	Not Detected
Toluene	0.76	13	2.9	49
trans-1,3-Dichloropropene	0.76	Not Detected	3.5	Not Detected
1,1,2-Trichloroethane	0.76	Not Detected	4.2	Not Detected
Tetrachloroethene	0.76	Not Detected	5.2	Not Detected
2-Hexanone	3.1	Not Detected	12	Not Detected



## Air Toxics

Client Sample ID: BVF-SUM-013-20181210-1

Lab ID#: 1812211-03A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121214	Date of Collection: 12/11/18 8:45:00 AM		
Dil. Factor:	1.53	Date of Analysis: 12/12/18 07:56 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.76	Not Detected	6.5	Not Detected
1,2-Dibromoethane (EDB)	0.76	Not Detected	5.9	Not Detected
Chlorobenzene	0.76	Not Detected	3.5	Not Detected
Ethyl Benzene	0.76	1.7	3.3	7.5
m,p-Xylene	0.76	3.7	3.3	16
o-Xylene	0.76	1.4	3.3	6.3
Styrene	0.76	Not Detected	3.2	Not Detected
Bromoform	0.76	Not Detected	7.9	Not Detected
Cumene	0.76	Not Detected	3.8	Not Detected
1,1,2,2-Tetrachloroethane	0.76	Not Detected	5.2	Not Detected
Propylbenzene	0.76	Not Detected	3.8	Not Detected
4-Ethyltoluene	0.76	1.0	3.8	5.0
1,3,5-Trimethylbenzene	0.76	Not Detected	3.8	Not Detected
1,2,4-Trimethylbenzene	0.76	0.84	3.8	4.1
1,3-Dichlorobenzene	0.76	Not Detected	4.6	Not Detected
1,4-Dichlorobenzene	0.76	Not Detected	4.6	Not Detected
alpha-Chlorotoluene	0.76	Not Detected	4.0	Not Detected
1,2-Dichlorobenzene	0.76	Not Detected	4.6	Not Detected
1,2,4-Trichlorobenzene	3.1	Not Detected	23	Not Detected
Hexachlorobutadiene	3.1	Not Detected	33	Not Detected
Methyl Acetate	7.6	18	23	55
Methylcyclohexane	3.1	Not Detected	12	Not Detected
Naphthalene	1.5	Not Detected	8.0	Not Detected

Container Type: 6 Liter Summa Canister (100% Cert Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	99	70-130



## Air Toxics

Client Sample ID: BVF-SUM-014-20181210-1

Lab ID#: 1812211-04A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121215	Date of Collection:	12/11/18 10:14:00 A	
Dil. Factor:	1.42	Date of Analysis:	12/12/18 08:23 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.71	Not Detected	3.5	Not Detected
Freon 114	0.71	Not Detected	5.0	Not Detected
Chloromethane	7.1	Not Detected	15	Not Detected
Vinyl Chloride	0.71	Not Detected	1.8	Not Detected
1,3-Butadiene	0.71	Not Detected	1.6	Not Detected
Bromomethane	7.1	Not Detected	28	Not Detected
Chloroethane	2.8	Not Detected	7.5	Not Detected
Freon 11	0.71	Not Detected	4.0	Not Detected
Ethanol	2.8	Not Detected	5.4	Not Detected
Freon 113	0.71	Not Detected	5.4	Not Detected
1,1-Dichloroethene	0.71	Not Detected	2.8	Not Detected
Acetone	7.1	Not Detected	17	Not Detected
2-Propanol	2.8	Not Detected	7.0	Not Detected
Carbon Disulfide	2.8	Not Detected	8.8	Not Detected
3-Chloropropene	2.8	Not Detected	8.9	Not Detected
Methylene Chloride	7.1	Not Detected	25	Not Detected
Methyl tert-butyl ether	2.8	Not Detected	10	Not Detected
trans-1,2-Dichloroethene	0.71	Not Detected	2.8	Not Detected
Hexane	0.71	Not Detected	2.5	Not Detected
1,1-Dichloroethane	0.71	Not Detected	2.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.8	Not Detected	8.4	Not Detected
cis-1,2-Dichloroethene	0.71	Not Detected	2.8	Not Detected
Tetrahydrofuran	0.71	Not Detected	2.1	Not Detected
Chloroform	0.71	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.71	Not Detected	3.9	Not Detected
Cyclohexane	0.71	Not Detected	2.4	Not Detected
Carbon Tetrachloride	0.71	Not Detected	4.5	Not Detected
2,2,4-Trimethylpentane	0.71	Not Detected	3.3	Not Detected
Benzene	0.71	Not Detected	2.3	Not Detected
1,2-Dichloroethane	0.71	Not Detected	2.9	Not Detected
Heptane	0.71	Not Detected	2.9	Not Detected
Trichloroethene	0.71	Not Detected	3.8	Not Detected
1,2-Dichloropropane	0.71	Not Detected	3.3	Not Detected
1,4-Dioxane	2.8	Not Detected	10	Not Detected
Bromodichloromethane	0.71	Not Detected	4.8	Not Detected
cis-1,3-Dichloropropene	0.71	Not Detected	3.2	Not Detected
4-Methyl-2-pentanone	0.71	Not Detected	2.9	Not Detected
Toluene	0.71	Not Detected	2.7	Not Detected
trans-1,3-Dichloropropene	0.71	Not Detected	3.2	Not Detected
1,1,2-Trichloroethane	0.71	Not Detected	3.9	Not Detected
Tetrachloroethene	0.71	Not Detected	4.8	Not Detected
2-Hexanone	2.8	Not Detected	12	Not Detected



## Air Toxics

Client Sample ID: BVF-SUM-014-20181210-1

Lab ID#: 1812211-04A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121215	Date of Collection: 12/11/18 10:14:00 A		
Dil. Factor:	1.42	Date of Analysis: 12/12/18 08:23 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.71	Not Detected	6.0	Not Detected
1,2-Dibromoethane (EDB)	0.71	Not Detected	5.4	Not Detected
Chlorobenzene	0.71	Not Detected	3.3	Not Detected
Ethyl Benzene	0.71	Not Detected	3.1	Not Detected
m,p-Xylene	0.71	Not Detected	3.1	Not Detected
o-Xylene	0.71	Not Detected	3.1	Not Detected
Styrene	0.71	Not Detected	3.0	Not Detected
Bromoform	0.71	Not Detected	7.3	Not Detected
Cumene	0.71	Not Detected	3.5	Not Detected
1,1,2,2-Tetrachloroethane	0.71	Not Detected	4.9	Not Detected
Propylbenzene	0.71	Not Detected	3.5	Not Detected
4-Ethyltoluene	0.71	Not Detected	3.5	Not Detected
1,3,5-Trimethylbenzene	0.71	Not Detected	3.5	Not Detected
1,2,4-Trimethylbenzene	0.71	Not Detected	3.5	Not Detected
1,3-Dichlorobenzene	0.71	Not Detected	4.3	Not Detected
1,4-Dichlorobenzene	0.71	Not Detected	4.3	Not Detected
alpha-Chlorotoluene	0.71	Not Detected	3.7	Not Detected
1,2-Dichlorobenzene	0.71	Not Detected	4.3	Not Detected
1,2,4-Trichlorobenzene	2.8	Not Detected	21	Not Detected
Hexachlorobutadiene	2.8	Not Detected	30	Not Detected
Methyl Acetate	7.1	Not Detected	22	Not Detected
Methylcyclohexane	2.8	Not Detected	11	Not Detected
Naphthalene	1.4	Not Detected	7.4	Not Detected

Container Type: 6 Liter Summa Canister (100% Cert Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	95	70-130

DRQ  
12/18/18



## Air Toxics

Client Sample ID: BVF-SUM-011-20181211-1

Lab ID#: 1812246-01A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121317	Date of Collection: 12/12/18 9:55:00 AM		
Dil. Factor:	1.68	Date of Analysis: 12/13/18 07:10 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.84	Not Detected	4.2	Not Detected
Freon 114	0.84	Not Detected	5.9	Not Detected
Chloromethane	8.4	Not Detected	17	Not Detected
Vinyl Chloride	0.84	Not Detected	2.1	Not Detected
1,3-Butadiene	0.84	Not Detected	1.8	Not Detected
Bromomethane	8.4	Not Detected	33	Not Detected
Chloroethane	3.4	Not Detected	8.9	Not Detected
Freon 11	0.84	Not Detected	4.7	Not Detected
Ethanol	3.4	Not Detected	6.3	Not Detected
Freon 113	0.84	Not Detected	6.4	Not Detected
1,1-Dichloroethene	0.84	Not Detected	3.3	Not Detected
Acetone	8.4	Not Detected	20	Not Detected
2-Propanol	3.4	Not Detected	8.2	Not Detected
Carbon Disulfide	3.4	Not Detected	10	Not Detected
3-Chloropropene	3.4	Not Detected	10	Not Detected
Methylene Chloride	8.4	Not Detected	29	Not Detected
Methyl tert-butyl ether	3.4	Not Detected	12	Not Detected
trans-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected
Hexane	0.84	Not Detected	3.0	Not Detected
1,1-Dichloroethane	0.84	Not Detected	3.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.4	Not Detected	9.9	Not Detected
cis-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected
Tetrahydrofuran	0.84	Not Detected	2.5	Not Detected
Chloroform	0.84	Not Detected	4.1	Not Detected
1,1,1-Trichloroethane	0.84	Not Detected	4.6	Not Detected
Cyclohexane	0.84	Not Detected	2.9	Not Detected
Carbon Tetrachloride	0.84	Not Detected	5.3	Not Detected
2,2,4-Trimethylpentane	0.84	Not Detected	3.9	Not Detected
Benzene	0.84	Not Detected	2.7	Not Detected
1,2-Dichloroethane	0.84	Not Detected	3.4	Not Detected
Heptane	0.84	Not Detected	3.4	Not Detected
Trichloroethene	0.84	Not Detected	4.5	Not Detected
1,2-Dichloropropane	0.84	Not Detected	3.9	Not Detected
1,4-Dioxane	3.4	Not Detected	12	Not Detected
Bromodichloromethane	0.84	Not Detected	5.6	Not Detected
cis-1,3-Dichloropropene	0.84	Not Detected	3.8	Not Detected
4-Methyl-2-pentanone	0.84	Not Detected	3.4	Not Detected
Toluene	0.84	Not Detected	3.2	Not Detected
trans-1,3-Dichloropropene	0.84	Not Detected	3.8	Not Detected
1,1,2-Trichloroethane	0.84	Not Detected	4.6	Not Detected
Tetrachloroethene	0.84	Not Detected	5.7	Not Detected
2-Hexanone	3.4	Not Detected	14	Not Detected



## Air Toxics

Client Sample ID: BVF-SUM-011-20181211-1

Lab ID#: 1812246-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121317	Date of Collection:	12/12/18 9:55:00 AM	
Dil. Factor:	1.68	Date of Analysis:	12/13/18 07:10 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.84	Not Detected	7.2	Not Detected
1,2-Dibromoethane (EDB)	0.84	Not Detected	6.4	Not Detected
Chlorobenzene	0.84	Not Detected	3.9	Not Detected
Ethyl Benzene	0.84	Not Detected	3.6	Not Detected
m,p-Xylene	0.84	Not Detected	3.6	Not Detected
o-Xylene	0.84	Not Detected	3.6	Not Detected
Styrene	0.84	Not Detected	3.6	Not Detected
Bromoform	0.84	Not Detected	8.7	Not Detected
Cumene	0.84	Not Detected	4.1	Not Detected
1,1,2,2-Tetrachloroethane	0.84	Not Detected	5.8	Not Detected
Propylbenzene	0.84	Not Detected	4.1	Not Detected
4-Ethyltoluene	0.84	Not Detected	4.1	Not Detected
1,3,5-Trimethylbenzene	0.84	Not Detected	4.1	Not Detected
1,2,4-Trimethylbenzene	0.84	Not Detected	4.1	Not Detected
1,3-Dichlorobenzene	0.84	Not Detected	5.0	Not Detected
1,4-Dichlorobenzene	0.84	Not Detected	5.0	Not Detected
alpha-Chlorotoluene	0.84	Not Detected	4.3	Not Detected
1,2-Dichlorobenzene	0.84	Not Detected	5.0	Not Detected
1,2,4-Trichlorobenzene	3.4	Not Detected	25	Not Detected
Hexachlorobutadiene	3.4	Not Detected	36	Not Detected
Methyl Acetate	8.4	Not Detected	25	Not Detected
Methylcyclohexane	3.4	Not Detected	13	Not Detected
Naphthalene	1.7	Not Detected	8.8	Not Detected

Container Type: 6 Liter Summa Canister (100% Cert Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	96	70-130

DPB  
12/18/18



## Air Toxics

Client Sample ID: BVF-SUM-012-20181211-1

Lab ID#: 1812246-02A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121318	Date of Collection: 12/12/18 10:58:00 A		
Dil. Factor:	1.71	Date of Analysis: 12/13/18 07:37 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.86	Not Detected	4.2	Not Detected
Freon 114	0.86	Not Detected	6.0	Not Detected
Chloromethane	8.6	Not Detected	18	Not Detected
Vinyl Chloride	0.86	Not Detected	2.2	Not Detected
1,3-Butadiene	0.86	Not Detected	1.9	Not Detected
Bromomethane	8.6	Not Detected	33	Not Detected
Chloroethane	3.4	Not Detected	9.0	Not Detected
Freon 11	0.86	Not Detected	4.8	Not Detected
Ethanol	3.4	Not Detected	6.4	Not Detected
Freon 113	0.86	Not Detected	6.6	Not Detected
1,1-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Acetone	8.6	Not Detected	20	Not Detected
2-Propanol	3.4	Not Detected	8.4	Not Detected
Carbon Disulfide	3.4	Not Detected	11	Not Detected
3-Chloropropene	3.4	Not Detected	11	Not Detected
Methylene Chloride	8.6	Not Detected	30	Not Detected
Methyl tert-butyl ether	3.4	Not Detected	12	Not Detected
trans-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Hexane	0.86	Not Detected	3.0	Not Detected
1,1-Dichloroethane	0.86	Not Detected	3.5	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.4	Not Detected	10	Not Detected
cis-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Tetrahydrofuran	0.86	Not Detected	2.5	Not Detected
Chloroform	0.86	Not Detected	4.2	Not Detected
1,1,1-Trichloroethane	0.86	Not Detected	4.7	Not Detected
Cyclohexane	0.86	Not Detected	2.9	Not Detected
Carbon Tetrachloride	0.86	Not Detected	5.4	Not Detected
2,2,4-Trimethylpentane	0.86	Not Detected	4.0	Not Detected
Benzene	0.86	2.2	2.7	7.2
1,2-Dichloroethane	0.86	Not Detected	3.5	Not Detected
Heptane	0.86	Not Detected	3.5	Not Detected
Trichloroethene	0.86	Not Detected	4.6	Not Detected
1,2-Dichloropropane	0.86	Not Detected	4.0	Not Detected
1,4-Dioxane	3.4	Not Detected	12	Not Detected
Bromodichloromethane	0.86	Not Detected	5.7	Not Detected
cis-1,3-Dichloropropene	0.86	Not Detected	3.9	Not Detected
4-Methyl-2-pentanone	0.86	Not Detected	3.5	Not Detected
Toluene	0.86	1.4	3.2	5.3
trans-1,3-Dichloropropene	0.86	Not Detected	3.9	Not Detected
1,1,2-Trichloroethane	0.86	Not Detected	4.7	Not Detected
Tetrachloroethene	0.86	Not Detected	5.8	Not Detected
2-Hexanone	3.4	Not Detected	14	Not Detected

DFB 12/18/18



## Air Toxics

Client Sample ID: BVF-SUM-012-20181211-1

Lab ID#: 1812246-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121318	Date of Collection: 12/12/18 10:58:00 A		
Dil. Factor:	1.71	Date of Analysis: 12/13/18 07:37 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.86	Not Detected	7.3	Not Detected
1,2-Dibromoethane (EDB)	0.86	Not Detected	6.6	Not Detected
Chlorobenzene	0.86	Not Detected	3.9	Not Detected
Ethyl Benzene	0.86	Not Detected	3.7	Not Detected
m,p-Xylene	0.86	Not Detected	3.7	Not Detected
o-Xylene	0.86	Not Detected	3.7	Not Detected
Styrene	0.86	Not Detected	3.6	Not Detected
Bromoform	0.86	Not Detected	8.8	Not Detected
Cumene	0.86	Not Detected	4.2	Not Detected
1,1,2,2-Tetrachloroethane	0.86	Not Detected	5.9	Not Detected
Propylbenzene	0.86	Not Detected	4.2	Not Detected
4-Ethyltoluene	0.86	Not Detected	4.2	Not Detected
1,3,5-Trimethylbenzene	0.86	Not Detected	4.2	Not Detected
1,2,4-Trimethylbenzene	0.86	Not Detected	4.2	Not Detected
1,3-Dichlorobenzene	0.86	Not Detected	5.1	Not Detected
1,4-Dichlorobenzene	0.86	Not Detected	5.1	Not Detected
alpha-Chlorotoluene	0.86	Not Detected	4.4	Not Detected
1,2-Dichlorobenzene	0.86	Not Detected	5.1	Not Detected
1,2,4-Trichlorobenzene	3.4	Not Detected	25	Not Detected
Hexachlorobutadiene	3.4	Not Detected	36	Not Detected
Methyl Acetate	8.6	Not Detected	26	Not Detected
Methylcyclohexane	3.4	Not Detected	14	Not Detected
Naphthalene	1.7	Not Detected	9.0	Not Detected

Container Type: 6 Liter Summa Canister (100% Cert Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	92	70-130

DRG  
12/18/18



## Air Toxics

Client Sample ID: BVF-SUM-013-20181211-1

Lab ID#: 1812246-03A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121319	Date of Collection: 12/12/18 8:52:00 AM		
Dil. Factor:	1.66	Date of Analysis: 12/13/18 08:03 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.83	Not Detected	4.1	Not Detected
Freon 114	0.83	Not Detected	5.8	Not Detected
Chloromethane	8.3	Not Detected	17	Not Detected
Vinyl Chloride	0.83	Not Detected	2.1	Not Detected
1,3-Butadiene	0.83	Not Detected	1.8	Not Detected
Bromomethane	8.3	Not Detected	32	Not Detected
Chloroethane	3.3	Not Detected	8.8	Not Detected
Freon 11	0.83	Not Detected	4.7	Not Detected
Ethanol	3.3	Not Detected	6.2	Not Detected
Freon 113	0.83	Not Detected	6.4	Not Detected
1,1-Dichloroethene	0.83	Not Detected	3.3	Not Detected
Acetone	8.3	20	20	47
2-Propanol	3.3	Not Detected	8.2	Not Detected
Carbon Disulfide	3.3	Not Detected	10	Not Detected
3-Chloropropene	3.3	Not Detected	10	Not Detected
Methylene Chloride	8.3	Not Detected	29	Not Detected
Methyl tert-butyl ether	3.3	Not Detected	12	Not Detected
trans-1,2-Dichloroethene	0.83	Not Detected	3.3	Not Detected
Hexane	0.83	Not Detected	2.9	Not Detected
1,1-Dichloroethane	0.83	Not Detected	3.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.3	3.8	9.8	11
cis-1,2-Dichloroethene	0.83	Not Detected	3.3	Not Detected
Tetrahydrofuran	0.83	3.0	2.4	8.8
Chloroform	0.83	Not Detected	4.0	Not Detected
1,1,1-Trichloroethane	0.83	Not Detected	4.5	Not Detected
Cyclohexane	0.83	Not Detected	2.8	Not Detected
Carbon Tetrachloride	0.83	Not Detected	5.2	Not Detected
2,2,4-Trimethylpentane	0.83	Not Detected	3.9	Not Detected
Benzene	0.83	9.0	2.6	29
1,2-Dichloroethane	0.83	Not Detected	3.4	Not Detected
Heptane	0.83	Not Detected	3.4	Not Detected
Trichloroethene	0.83	Not Detected	4.5	Not Detected
1,2-Dichloropropane	0.83	Not Detected	3.8	Not Detected
1,4-Dioxane	3.3	Not Detected	12	Not Detected
Bromodichloromethane	0.83	Not Detected	5.6	Not Detected
cis-1,3-Dichloropropene	0.83	Not Detected	3.8	Not Detected
4-Methyl-2-pentanone	0.83	Not Detected	3.4	Not Detected
Toluene	0.83	4.4	3.1	16
trans-1,3-Dichloropropene	0.83	Not Detected	3.8	Not Detected
1,1,2-Trichloroethane	0.83	Not Detected	4.5	Not Detected
Tetrachloroethene	0.83	Not Detected	5.6	Not Detected
2-Hexanone	3.3	Not Detected	14	Not Detected

DRG 12/18/18



## Air Toxics

Client Sample ID: BVF-SUM-013-20181211-1

Lab ID#: 1812246-03A

### EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121319	Date of Collection: 12/12/18 8:52:00 AM		
Dil. Factor:	1.66	Date of Analysis: 12/13/18 08:03 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.83	Not Detected	7.1	Not Detected
1,2-Dibromoethane (EDB)	0.83	Not Detected	6.4	Not Detected
Chlorobenzene	0.83	Not Detected	3.8	Not Detected
Ethyl Benzene	0.83	Not Detected	3.6	Not Detected
m,p-Xylene	0.83	1.2	3.6	5.2
o-Xylene	0.83	Not Detected	3.6	Not Detected
Styrene	0.83	Not Detected	3.5	Not Detected
Bromoform	0.83	Not Detected	8.6	Not Detected
Cumene	0.83	Not Detected	4.1	Not Detected
1,1,2,2-Tetrachloroethane	0.83	Not Detected	5.7	Not Detected
Propylbenzene	0.83	Not Detected	4.1	Not Detected
4-Ethyltoluene	0.83	Not Detected	4.1	Not Detected
1,3,5-Trimethylbenzene	0.83	Not Detected	4.1	Not Detected
1,2,4-Trimethylbenzene	0.83	Not Detected	4.1	Not Detected
1,3-Dichlorobenzene	0.83	Not Detected	5.0	Not Detected
1,4-Dichlorobenzene	0.83	Not Detected	5.0	Not Detected
alpha-Chlorotoluene	0.83	Not Detected	4.3	Not Detected
1,2-Dichlorobenzene	0.83	Not Detected	5.0	Not Detected
1,2,4-Trichlorobenzene	3.3	Not Detected	25	Not Detected
Hexachlorobutadiene	3.3	Not Detected	35	Not Detected
Methyl Acetate	8.3	Not Detected	25	Not Detected
Methylcyclohexane	3.3	Not Detected	13	Not Detected
Naphthalene	1.7	Not Detected	8.7	Not Detected

Container Type: 6 Liter Summa Canister (100% Cert Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	95	70-130

DFB  
12/13/18



## Air Toxics

Client Sample ID: BVF-SUM-014-20181211-1

Lab ID#: 1812246-04A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121320	Date of Collection: 12/12/18 10:35:00 A		
Dil. Factor:	1.48	Date of Analysis: 12/13/18 08:29 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.74	Not Detected	3.6	Not Detected
Freon 114	0.74	Not Detected	5.2	Not Detected
Chloromethane	7.4	Not Detected	15	Not Detected
Vinyl Chloride	0.74	Not Detected	1.9	Not Detected
1,3-Butadiene	0.74	Not Detected	1.6	Not Detected
Bromomethane	7.4	Not Detected	29	Not Detected
Chloroethane	3.0	Not Detected	7.8	Not Detected
Freon 11	0.74	Not Detected	4.2	Not Detected
Ethanol	3.0	Not Detected	5.6	Not Detected
Freon 113	0.74	Not Detected	5.7	Not Detected
1,1-Dichloroethene	0.74	Not Detected	2.9	Not Detected
Acetone	7.4	Not Detected	18	Not Detected
2-Propanol	3.0	Not Detected	7.3	Not Detected
Carbon Disulfide	3.0	Not Detected	9.2	Not Detected
3-Chloropropene	3.0	Not Detected	9.3	Not Detected
Methylene Chloride	7.4	Not Detected	26	Not Detected
Methyl tert-butyl ether	3.0	Not Detected	11	Not Detected
trans-1,2-Dichloroethene	0.74	Not Detected	2.9	Not Detected
Hexane	0.74	Not Detected	2.6	Not Detected
1,1-Dichloroethane	0.74	Not Detected	3.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.0	Not Detected	8.7	Not Detected
cis-1,2-Dichloroethene	0.74	Not Detected	2.9	Not Detected
Tetrahydrofuran	0.74	Not Detected	2.2	Not Detected
Chloroform	0.74	Not Detected	3.6	Not Detected
1,1,1-Trichloroethane	0.74	Not Detected	4.0	Not Detected
Cyclohexane	0.74	Not Detected	2.5	Not Detected
Carbon Tetrachloride	0.74	Not Detected	4.6	Not Detected
2,2,4-Trimethylpentane	0.74	Not Detected	3.4	Not Detected
Benzene	0.74	Not Detected	2.4	Not Detected
1,2-Dichloroethane	0.74	Not Detected	3.0	Not Detected
Heptane	0.74	Not Detected	3.0	Not Detected
Trichloroethene	0.74	Not Detected	4.0	Not Detected
1,2-Dichloropropane	0.74	Not Detected	3.4	Not Detected
1,4-Dioxane	3.0	Not Detected	11	Not Detected
Bromodichloromethane	0.74	Not Detected	5.0	Not Detected
cis-1,3-Dichloropropene	0.74	Not Detected	3.4	Not Detected
4-Methyl-2-pentanone	0.74	Not Detected	3.0	Not Detected
Toluene	0.74	Not Detected	2.8	Not Detected
trans-1,3-Dichloropropene	0.74	Not Detected	3.4	Not Detected
1,1,2-Trichloroethane	0.74	Not Detected	4.0	Not Detected
Tetrachloroethene	0.74	Not Detected	5.0	Not Detected
2-Hexanone	3.0	Not Detected	12	Not Detected

OFG  
12/18/18



## Air Toxics

Client Sample ID: BVF-SUM-014-20181211-1

Lab ID#: 1812246-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121320	Date of Collection: 12/12/18 10:35:00 A		
Dil. Factor:	1.48	Date of Analysis: 12/13/18 08:29 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.74	Not Detected	6.3	Not Detected
1,2-Dibromoethane (EDB)	0.74	Not Detected	5.7	Not Detected
Chlorobenzene	0.74	Not Detected	3.4	Not Detected
Ethyl Benzene	0.74	Not Detected	3.2	Not Detected
m,p-Xylene	0.74	Not Detected	3.2	Not Detected
o-Xylene	0.74	Not Detected	3.2	Not Detected
Styrene	0.74	Not Detected	3.2	Not Detected
Bromoform	0.74	Not Detected	7.6	Not Detected
Cumene	0.74	Not Detected	3.6	Not Detected
1,1,2,2-Tetrachloroethane	0.74	Not Detected	5.1	Not Detected
Propylbenzene	0.74	Not Detected	3.6	Not Detected
4-Ethyltoluene	0.74	Not Detected	3.6	Not Detected
1,3,5-Trimethylbenzene	0.74	Not Detected	3.6	Not Detected
1,2,4-Trimethylbenzene	0.74	Not Detected	3.6	Not Detected
1,3-Dichlorobenzene	0.74	Not Detected	4.4	Not Detected
1,4-Dichlorobenzene	0.74	Not Detected	4.4	Not Detected
alpha-Chlorotoluene	0.74	Not Detected	3.8	Not Detected
1,2-Dichlorobenzene	0.74	Not Detected	4.4	Not Detected
1,2,4-Trichlorobenzene	3.0	Not Detected	22	Not Detected
Hexachlorobutadiene	3.0	Not Detected	32	Not Detected
Methyl Acetate	7.4	Not Detected	22	Not Detected
Methylcyclohexane	3.0	Not Detected	12	Not Detected
Naphthalene	1.5	Not Detected	7.8	Not Detected

Container Type: 6 Liter Summa Canister (100% Cert Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	92	70-130

PFB  
12/18/18



## Air Toxics

Client Sample ID: BVF-SUM-011-20181212-01

Lab ID#: 1812274-01A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121418	Date of Collection:	12/13/18 9:55:00 AM	
Dil. Factor:	1.64	Date of Analysis:	12/14/18 09:35 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.82	Not Detected	4.0	Not Detected
Freon 114	0.82	Not Detected	5.7	Not Detected
Chloromethane	8.2	Not Detected	17	Not Detected
Vinyl Chloride	0.82	Not Detected	2.1	Not Detected
1,3-Butadiene	0.82	Not Detected	1.8	Not Detected
Bromomethane	8.2	Not Detected	32	Not Detected
Chloroethane	3.3	Not Detected	8.6	Not Detected
Freon 11	0.82	Not Detected	4.6	Not Detected
Ethanol	3.3	Not Detected	6.2	Not Detected
Freon 113	0.82	Not Detected	6.3	Not Detected
1,1-Dichloroethene	0.82	Not Detected	3.2	Not Detected
Acetone	8.2	Not Detected	19	Not Detected
2-Propanol	3.3	Not Detected	8.1	Not Detected
Carbon Disulfide	3.3	Not Detected	10	Not Detected
3-Chloropropene	3.3	Not Detected	10	Not Detected
Methylene Chloride	8.2	Not Detected	28	Not Detected
Methyl tert-butyl ether	3.3	Not Detected	12	Not Detected
trans-1,2-Dichloroethene	0.82	Not Detected	3.2	Not Detected
Hexane	0.82	Not Detected	2.9	Not Detected
1,1-Dichloroethane	0.82	Not Detected	3.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.3	Not Detected	9.7	Not Detected
cis-1,2-Dichloroethene	0.82	Not Detected	3.2	Not Detected
Tetrahydrofuran	0.82	Not Detected	2.4	Not Detected
Chloroform	0.82	Not Detected	4.0	Not Detected
1,1,1-Trichloroethane	0.82	Not Detected	4.5	Not Detected
Cyclohexane	0.82	Not Detected	2.8	Not Detected
Carbon Tetrachloride	0.82	Not Detected	5.2	Not Detected
2,2,4-Trimethylpentane	0.82	Not Detected	3.8	Not Detected
Benzene	0.82	0.85	2.6	2.7
1,2-Dichloroethane	0.82	Not Detected	3.3	Not Detected
Heptane	0.82	Not Detected	3.4	Not Detected
Trichloroethene	0.82	Not Detected	4.4	Not Detected
1,2-Dichloropropane	0.82	Not Detected	3.8	Not Detected
1,4-Dioxane	3.3	Not Detected	12	Not Detected
Bromodichloromethane	0.82	Not Detected	5.5	Not Detected
cis-1,3-Dichloropropene	0.82	Not Detected	3.7	Not Detected
4-Methyl-2-pentanone	0.82	Not Detected	3.4	Not Detected
Toluene	0.82	Not Detected	3.1	Not Detected
trans-1,3-Dichloropropene	0.82	Not Detected	3.7	Not Detected
1,1,2-Trichloroethane	0.82	Not Detected	4.5	Not Detected
Tetrachloroethene	0.82	Not Detected	5.6	Not Detected
2-Hexanone	3.3	Not Detected	13	Not Detected

OFG  
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## Air Toxics

Client Sample ID: BVF-SUM-011-20181212-01

Lab ID#: 1812274-01A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121418	Date of Collection:	12/13/18 9:55:00 AM	
Dil. Factor:	1.64	Date of Analysis:	12/14/18 09:35 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.82	Not Detected	7.0	Not Detected
1,2-Dibromoethane (EDB)	0.82	Not Detected	6.3	Not Detected
Chlorobenzene	0.82	Not Detected	3.8	Not Detected
Ethyl Benzene	0.82	Not Detected	3.6	Not Detected
m,p-Xylene	0.82	Not Detected	3.6	Not Detected
o-Xylene	0.82	Not Detected	3.6	Not Detected
Styrene	0.82	Not Detected	3.5	Not Detected
Bromoform	0.82	Not Detected	8.5	Not Detected
Cumene	0.82	Not Detected	4.0	Not Detected
1,1,2,2-Tetrachloroethane	0.82	Not Detected	5.6	Not Detected
Propylbenzene	0.82	Not Detected	4.0	Not Detected
4-Ethyltoluene	0.82	Not Detected	4.0	Not Detected
1,3,5-Trimethylbenzene	0.82	Not Detected	4.0	Not Detected
1,2,4-Trimethylbenzene	0.82	Not Detected	4.0	Not Detected
1,3-Dichlorobenzene	0.82	Not Detected	4.9	Not Detected
1,4-Dichlorobenzene	0.82	Not Detected	4.9	Not Detected
alpha-Chlorotoluene	0.82	Not Detected	4.2	Not Detected
1,2-Dichlorobenzene	0.82	Not Detected	4.9	Not Detected
1,2,4-Trichlorobenzene	3.3	Not Detected	24	Not Detected
Hexachlorobutadiene	3.3	Not Detected	35	Not Detected
Methyl Acetate	8.2	Not Detected	25	Not Detected
Methylcyclohexane	3.3	Not Detected	13	Not Detected
Naphthalene	1.6	Not Detected	8.6	Not Detected

Container Type: 6 Liter Summa Canister (100% Cert Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	93	70-130



## Air Toxics

Client Sample ID: BVF-SUM-012-20181212-01

Lab ID#: 1812274-02A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121419	Date of Collection: 12/13/18 10:26:00 A		
Dil. Factor:	1.71	Date of Analysis: 12/14/18 10:01 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.86	Not Detected	4.2	Not Detected
Freon 114	0.86	Not Detected	6.0	Not Detected
Chloromethane	8.6	Not Detected	18	Not Detected
Vinyl Chloride	0.86	Not Detected	2.2	Not Detected
1,3-Butadiene	0.86	Not Detected	1.9	Not Detected
Bromomethane	8.6	Not Detected	33	Not Detected
Chloroethane	3.4	Not Detected	9.0	Not Detected
Freon 11	0.86	Not Detected	4.8	Not Detected
Ethanol	3.4	Not Detected	6.4	Not Detected
Freon 113	0.86	Not Detected	6.6	Not Detected
1,1-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Acetone	8.6	Not Detected	20	Not Detected
2-Propanol	3.4	Not Detected	8.4	Not Detected
Carbon Disulfide	3.4	Not Detected	11	Not Detected
3-Chloropropene	3.4	Not Detected	11	Not Detected
Methylene Chloride	8.6	Not Detected	30	Not Detected
Methyl tert-butyl ether	3.4	Not Detected	12	Not Detected
trans-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Hexane	0.86	Not Detected	3.0	Not Detected
1,1-Dichloroethane	0.86	Not Detected	3.5	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.4	Not Detected	10	Not Detected
cis-1,2-Dichloroethene	0.86	Not Detected	3.4	Not Detected
Tetrahydrofuran	0.86	Not Detected	2.5	Not Detected
Chloroform	0.86	Not Detected	4.2	Not Detected
1,1,1-Trichloroethane	0.86	Not Detected	4.7	Not Detected
Cyclohexane	0.86	Not Detected	2.9	Not Detected
Carbon Tetrachloride	0.86	Not Detected	5.4	Not Detected
2,2,4-Trimethylpentane	0.86	Not Detected	4.0	Not Detected
Benzene	0.86	1.0	2.7	3.3
1,2-Dichloroethane	0.86	Not Detected	3.5	Not Detected
Heptane	0.86	Not Detected	3.5	Not Detected
Trichloroethene	0.86	Not Detected	4.6	Not Detected
1,2-Dichloropropane	0.86	Not Detected	4.0	Not Detected
1,4-Dioxane	3.4	Not Detected	12	Not Detected
Bromodichloromethane	0.86	Not Detected	5.7	Not Detected
cis-1,3-Dichloropropene	0.86	Not Detected	3.9	Not Detected
4-Methyl-2-pentanone	0.86	Not Detected	3.5	Not Detected
Toluene	0.86	Not Detected	3.2	Not Detected
trans-1,3-Dichloropropene	0.86	Not Detected	3.9	Not Detected
1,1,2-Trichloroethane	0.86	Not Detected	4.7	Not Detected
Tetrachloroethene	0.86	Not Detected	5.8	Not Detected
2-Hexanone	3.4	Not Detected	14	Not Detected

DRB 12/18/18



## Air Toxics

Client Sample ID: BVF-SUM-012-20181212-01

Lab ID#: 1812274-02A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121419	Date of Collection:	12/13/18 10:26:00 A	
Dil. Factor:	1.71	Date of Analysis:	12/14/18 10:01 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.86	Not Detected	7.3	Not Detected
1,2-Dibromoethane (EDB)	0.86	Not Detected	6.6	Not Detected
Chlorobenzene	0.86	Not Detected	3.9	Not Detected
Ethyl Benzene	0.86	Not Detected	3.7	Not Detected
m,p-Xylene	0.86	Not Detected	3.7	Not Detected
o-Xylene	0.86	Not Detected	3.7	Not Detected
Styrene	0.86	Not Detected	3.6	Not Detected
Bromoform	0.86	Not Detected	8.8	Not Detected
Cumene	0.86	Not Detected	4.2	Not Detected
1,1,2,2-Tetrachloroethane	0.86	Not Detected	5.9	Not Detected
Propylbenzene	0.86	Not Detected	4.2	Not Detected
4-Ethyltoluene	0.86	Not Detected	4.2	Not Detected
1,3,5-Trimethylbenzene	0.86	Not Detected	4.2	Not Detected
1,2,4-Trimethylbenzene	0.86	Not Detected	4.2	Not Detected
1,3-Dichlorobenzene	0.86	Not Detected	5.1	Not Detected
1,4-Dichlorobenzene	0.86	Not Detected	5.1	Not Detected
alpha-Chlorotoluene	0.86	Not Detected	4.4	Not Detected
1,2-Dichlorobenzene	0.86	Not Detected	5.1	Not Detected
1,2,4-Trichlorobenzene	3.4	Not Detected	25	Not Detected
Hexachlorobutadiene	3.4	Not Detected	36	Not Detected
Methyl Acetate	8.6	Not Detected	26	Not Detected
Methylcyclohexane	3.4	Not Detected	14	Not Detected
Naphthalene	1.7	Not Detected	9.0	Not Detected

Container Type: 6 Liter Summa Canister (100% Cert Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	95	70-130

DFG 18/18



## Air Toxics

Client Sample ID: BVF-SUM-013-20181212-1

Lab ID#: 1812274-03A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121420	Date of Collection: 12/13/18 9:26:00 AM		
Dil. Factor:	1.68	Date of Analysis: 12/14/18 10:27 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.84	Not Detected	4.2	Not Detected
Freon 114	0.84	Not Detected	5.9	Not Detected
Chloromethane	8.4	Not Detected	17	Not Detected
Vinyl Chloride	0.84	Not Detected	2.1	Not Detected
1,3-Butadiene	0.84	Not Detected	1.8	Not Detected
Bromomethane	8.4	Not Detected	33	Not Detected
Chloroethane	3.4	Not Detected	8.9	Not Detected
Freon 11	0.84	Not Detected	4.7	Not Detected
Ethanol	3.4	Not Detected	6.3	Not Detected
Freon 113	0.84	Not Detected	6.4	Not Detected
1,1-Dichloroethene	0.84	Not Detected	3.3	Not Detected
Acetone	8.4	16	20	38
2-Propanol	3.4	Not Detected	8.2	Not Detected
Carbon Disulfide	3.4	Not Detected	10	Not Detected
3-Chloropropene	3.4	Not Detected	10	Not Detected
Methylene Chloride	8.4	Not Detected	29	Not Detected
Methyl tert-butyl ether	3.4	Not Detected	12	Not Detected
trans-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected
Hexane	0.84	Not Detected	3.0	Not Detected
1,1-Dichloroethane	0.84	Not Detected	3.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.4	Not Detected	9.9	Not Detected
cis-1,2-Dichloroethene	0.84	Not Detected	3.3	Not Detected
Tetrahydrofuran	0.84	1.7	2.5	5.0
Chloroform	0.84	Not Detected	4.1	Not Detected
1,1,1-Trichloroethane	0.84	Not Detected	4.6	Not Detected
Cyclohexane	0.84	Not Detected	2.9	Not Detected
Carbon Tetrachloride	0.84	Not Detected	5.3	Not Detected
2,2,4-Trimethylpentane	0.84	Not Detected	3.9	Not Detected
Benzene	0.84	6.7	2.7	21
1,2-Dichloroethane	0.84	Not Detected	3.4	Not Detected
Heptane	0.84	Not Detected	3.4	Not Detected
Trichloroethene	0.84	Not Detected	4.5	Not Detected
1,2-Dichloropropane	0.84	Not Detected	3.9	Not Detected
1,4-Dioxane	3.4	Not Detected	12	Not Detected
Bromodichloromethane	0.84	Not Detected	5.6	Not Detected
cis-1,3-Dichloropropene	0.84	Not Detected	3.8	Not Detected
4-Methyl-2-pentanone	0.84	Not Detected	3.4	Not Detected
Toluene	0.84	3.4	3.2	13
trans-1,3-Dichloropropene	0.84	Not Detected	3.8	Not Detected
1,1,2-Trichloroethane	0.84	Not Detected	4.6	Not Detected
Tetrachloroethene	0.84	Not Detected	5.7	Not Detected
2-Hexanone	3.4	Not Detected	14	Not Detected

*DRB 12/18/18*



## Air Toxics

Client Sample ID: BVF-SUM-013-20181212-1

Lab ID#: 1812274-03A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121420	Date of Collection:	12/13/18 9:26:00 AM	
Dil. Factor:	1.68	Date of Analysis:	12/14/18 10:27 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.84	Not Detected	7.2	Not Detected
1,2-Dibromoethane (EDB)	0.84	Not Detected	6.4	Not Detected
Chlorobenzene	0.84	Not Detected	3.9	Not Detected
Ethyl Benzene	0.84	Not Detected	3.6	Not Detected
m,p-Xylene	0.84	1.0	3.6	4.4
o-Xylene	0.84	Not Detected	3.6	Not Detected
Styrene	0.84	Not Detected	3.6	Not Detected
Bromoform	0.84	Not Detected	8.7	Not Detected
Cumene	0.84	Not Detected	4.1	Not Detected
1,1,2,2-Tetrachloroethane	0.84	Not Detected	5.8	Not Detected
Propylbenzene	0.84	Not Detected	4.1	Not Detected
4-Ethyltoluene	0.84	Not Detected	4.1	Not Detected
1,3,5-Trimethylbenzene	0.84	Not Detected	4.1	Not Detected
1,2,4-Trimethylbenzene	0.84	Not Detected	4.1	Not Detected
1,3-Dichlorobenzene	0.84	Not Detected	5.0	Not Detected
1,4-Dichlorobenzene	0.84	Not Detected	5.0	Not Detected
alpha-Chlorotoluene	0.84	Not Detected	4.3	Not Detected
1,2-Dichlorobenzene	0.84	Not Detected	5.0	Not Detected
1,2,4-Trichlorobenzene	3.4	Not Detected	25	Not Detected
Hexachlorobutadiene	3.4	Not Detected	36	Not Detected
Methyl Acetate	8.4	Not Detected	25	Not Detected
Methylcyclohexane	3.4	Not Detected	13	Not Detected
Naphthalene	1.7	Not Detected	8.8	Not Detected

Container Type: 6 Liter Summa Canister (100% Cert Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	94	70-130

DCE 12/18/18



## Air Toxics

Client Sample ID: BVF-SUM-014-20181212-1

Lab ID#: 1812274-04A

### EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121422	Date of Collection: 12/13/18 10:15:00 A		
Dil. Factor:	1.52	Date of Analysis: 12/14/18 11:20 PM		
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.76	Not Detected	3.8	Not Detected
Freon 114	0.76	Not Detected	5.3	Not Detected
Chloromethane	7.6	Not Detected	16	Not Detected
Vinyl Chloride	0.76	Not Detected	1.9	Not Detected
1,3-Butadiene	0.76	Not Detected	1.7	Not Detected
Bromomethane	7.6	Not Detected	30	Not Detected
Chloroethane	3.0	Not Detected	8.0	Not Detected
Freon 11	0.76	Not Detected	4.3	Not Detected
Ethanol	3.0	Not Detected	5.7	Not Detected
Freon 113	0.76	Not Detected	5.8	Not Detected
1,1-Dichloroethene	0.76	Not Detected	3.0	Not Detected
Acetone	7.6	Not Detected	18	Not Detected
2-Propanol	3.0	Not Detected	7.5	Not Detected
Carbon Disulfide	3.0	Not Detected	9.5	Not Detected
3-Chloropropene	3.0	Not Detected	9.5	Not Detected
Methylene Chloride	7.6	Not Detected	26	Not Detected
Methyl tert-butyl ether	3.0	Not Detected	11	Not Detected
trans-1,2-Dichloroethene	0.76	Not Detected	3.0	Not Detected
Hexane	0.76	Not Detected	2.7	Not Detected
1,1-Dichloroethane	0.76	Not Detected	3.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.0	Not Detected	9.0	Not Detected
cis-1,2-Dichloroethene	0.76	Not Detected	3.0	Not Detected
Tetrahydrofuran	0.76	Not Detected	2.2	Not Detected
Chloroform	0.76	Not Detected	3.7	Not Detected
1,1,1-Trichloroethane	0.76	Not Detected	4.1	Not Detected
Cyclohexane	0.76	Not Detected	2.6	Not Detected
Carbon Tetrachloride	0.76	Not Detected	4.8	Not Detected
2,2,4-Trimethylpentane	0.76	Not Detected	3.6	Not Detected
Benzene	0.76	Not Detected	2.4	Not Detected
1,2-Dichloroethane	0.76	Not Detected	3.1	Not Detected
Heptane	0.76	Not Detected	3.1	Not Detected
Trichloroethene	0.76	Not Detected	4.1	Not Detected
1,2-Dichloropropane	0.76	Not Detected	3.5	Not Detected
1,4-Dioxane	3.0	Not Detected	11	Not Detected
Bromodichloromethane	0.76	Not Detected	5.1	Not Detected
cis-1,3-Dichloropropene	0.76	Not Detected	3.4	Not Detected
4-Methyl-2-pentanone	0.76	Not Detected	3.1	Not Detected
Toluene	0.76	Not Detected	2.9	Not Detected
trans-1,3-Dichloropropene	0.76	Not Detected	3.4	Not Detected
1,1,2-Trichloroethane	0.76	Not Detected	4.1	Not Detected
Tetrachloroethene	0.76	Not Detected	5.2	Not Detected
2-Hexanone	3.0	Not Detected	12	Not Detected

DRS  
12/14/18



## Air Toxics

Client Sample ID: BVF-SUM-014-20181212-1

Lab ID#: 1812274-04A

### EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121422	Date of Collection:	12/13/18 10:15:00 A	
Dil. Factor:	1.52	Date of Analysis:	12/14/18 11:20 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.76	Not Detected	6.5	Not Detected
1,2-Dibromoethane (EDB)	0.76	Not Detected	5.8	Not Detected
Chlorobenzene	0.76	Not Detected	3.5	Not Detected
Ethyl Benzene	0.76	Not Detected	3.3	Not Detected
m,p-Xylene	0.76	Not Detected	3.3	Not Detected
o-Xylene	0.76	Not Detected	3.3	Not Detected
Styrene	0.76	Not Detected	3.2	Not Detected
Bromoform	0.76	Not Detected	7.8	Not Detected
Cumene	0.76	Not Detected	3.7	Not Detected
1,1,2,2-Tetrachloroethane	0.76	Not Detected	5.2	Not Detected
Propylbenzene	0.76	Not Detected	3.7	Not Detected
4-Ethyltoluene	0.76	Not Detected	3.7	Not Detected
1,3,5-Trimethylbenzene	0.76	Not Detected	3.7	Not Detected
1,2,4-Trimethylbenzene	0.76	Not Detected	3.7	Not Detected
1,3-Dichlorobenzene	0.76	Not Detected	4.6	Not Detected
1,4-Dichlorobenzene	0.76	Not Detected	4.6	Not Detected
alpha-Chlorotoluene	0.76	Not Detected	3.9	Not Detected
1,2-Dichlorobenzene	0.76	Not Detected	4.6	Not Detected
1,2,4-Trichlorobenzene	3.0	Not Detected	22	Not Detected
Hexachlorobutadiene	3.0	Not Detected	32	Not Detected
Methyl Acetate	7.6	Not Detected	23	Not Detected
Methylcyclohexane	3.0	Not Detected	12	Not Detected
Naphthalene	1.5	Not Detected	8.0	Not Detected

Container Type: 6 Liter Summa Canister (100% Cert Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	92	70-130

DRB  
12/18/18



## Air Toxics

Client Sample ID: BVF-SUM-014-20181212-3

Lab ID#: 1812274-05A

## EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121421	Date of Collection:	12/13/18 12:20:00 P	
Dil. Factor:	1.00	Date of Analysis:	12/14/18 10:53 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	2.0	Not Detected	3.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

DPE 18/18



## Air Toxics

Client Sample ID: BVF-SUM-014-20181212-3

Lab ID#: 1812274-05A

### EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p121421	Date of Collection:	12/13/18 12:20:00 P	
Dil. Factor:	1.00	Date of Analysis:	12/14/18 10:53 PM	
Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	0.50	Not Detected	2.2	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
Methyl Acetate	5.0	Not Detected	15	Not Detected
Methylcyclohexane	2.0	Not Detected	8.0	Not Detected
Naphthalene	1.0	Not Detected	5.2	Not Detected

Container Type: 6 Liter Summa Canister (100% Cert Ambient)

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	93	70-130

DFC  
12/18/18